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Notice of Allowability	Application No.	Applicant(s)	
	10/700,974	CHITALIA ET AL.	
	Examiner	Art Unit	
	Lam P. Pham	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/4/2003.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none">1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>11/4/2003</u>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none">5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____7. <input type="checkbox"/> Examiner's Amendment/Comment8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance9. <input type="checkbox"/> Other _____ |
|---|--|

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-18 allowed.
2. The following is an examiner's statement of reasons for allowance:

There are prior arts teach of a seatbelt system for detecting and identifying the presence of a child, a child seat or a low mass adult based on seatbelt tension only if the seatbelt is buckled as found in Sullivan et al. (US 6868745) and Curtis et. al. (US6623032). Also, there are prior arts teach of using vehicle seatbelt system for detecting improper installation of the child seat based on the unfastening condition of the buckle alone as found in Barnes (US 5711574).

However, no prior art fairly teach or suggest a method (**claim 1**) of detecting improper installation of an auxiliary child seat in a motor vehicle and alerting a vehicle operator in the case of improper installation, the auxiliary child seat having a properly installed condition wherein the auxiliary child seat is resting on top of a vehicle seat, a seatbelt anchored to the vehicle is fastened around the auxiliary child seat by means of seatbelt buckle, and the seatbelt is tightened to a tautness within an acceptable range, comprising the steps of:

monitoring a seat occupancy sensor to determine whether the auxiliary child seat is present on the vehicle seat;

monitoring a buckle condition sensor to determine whether the seatbelt buckle is fastened or unfastened;

Art Unit: 2612

activating an alerting device if the auxiliary child seat is present on the vehicle seat and the seatbelt buckle is unfastened;

monitoring a seatbelt tension sensor to determine a tautness of the seatbelt; and
activating the alerting device if the auxiliary child seat is present, the seatbelt buckle is fastened, and the seatbelt tautness is not within the acceptable range.

There are no prior art fairly teach or suggest an apparatus (**claim 11**) for detecting improper installation of an auxiliary child seat in a motor vehicle and providing an alert in the case of improper installation, comprising:

a seat occupancy sensor providing a first electrical signal indicating whether the auxiliary child seat is present on a vehicle seat;

a buckle condition sensor providing a second electrical signal indicating whether the seatbelt buckle is fastened or unfastened;

a seatbelt tension sensor providing a third electrical signal indicating a tautness of the seatbelt;

a child seat detection module receiving the first, second and third electrical signals and determining an improper installation condition if the auxiliary child seat is present and the seatbelt buckle is unfastened, and further determining an improper installation condition if the auxiliary child seat is present, the seatbelt buckle is fastened, and the seatbelt tautness is not within an acceptable range; and

an alerting device operative to alert a vehicle occupant if the child seat detection module determines that the improper installation condition exists.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rhein et al. (US 6450576) disclose a universal attachment for child car seat.

Curtis et al. (US 6623032) disclose a belt force sensor.

Sullivan et al. (US 6868745) disclose a seat restraint buckle and tension sensor.

Knox (US 2005/0040960) disclose a seat belt tension indicator.

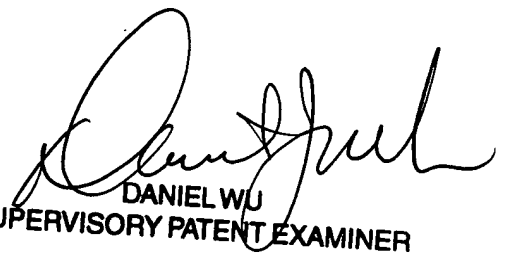
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lam P. Pham whose telephone number is 571-272-2977. The examiner can normally be reached on 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A. Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lam Pham
January 18, 2006.


DANIEL WU
SUPERVISORY PATENT EXAMINER
2/09/07